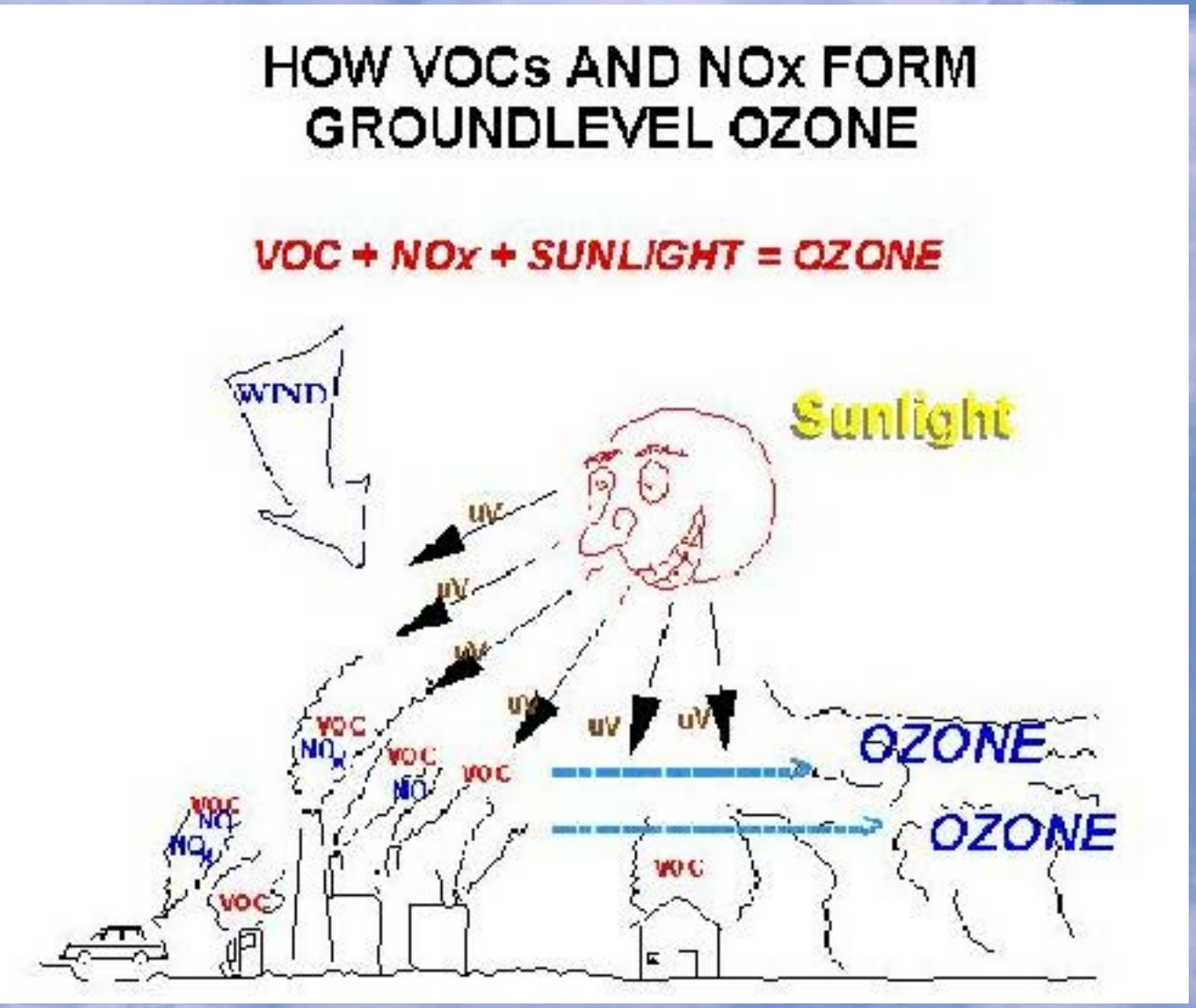
8-Hour Ozone

National Ambient Air Quality Standard

U.S. Environmental Protection Agency

Region 7

What is ozone?



- Peak ozone levels typically occur during hot, dry, stagnant summertime conditions.
- Length of the ozone season varies from one area of the United States to another.

Where do ozone precursor pollutants originate?

History of EPA's Ozone National Ambient Air Quality Standard

(A few key events outlined below)

July 1997-	8-hour Ozone established
May 1999-	DC Circuit Court Split decision on the new NAAQS
February 2001-	Supreme Court Decision on new NAAQS
March 2002-	DC Circuit Court Decision on remaining issues associated with new NAAQS

History of EPA's Ozone National Ambient Air Quality Standard

(A few key events outlined below)

April 1971- Photochemical Oxidants

0.08 ppm- not to be exceeded more than 1-hour per year

February 1979- 1-hour Ozone Standard

0.12 ppm- expected exceedances less than or equal to 1/year in a 3-year period

Why is EPA changing the standard?

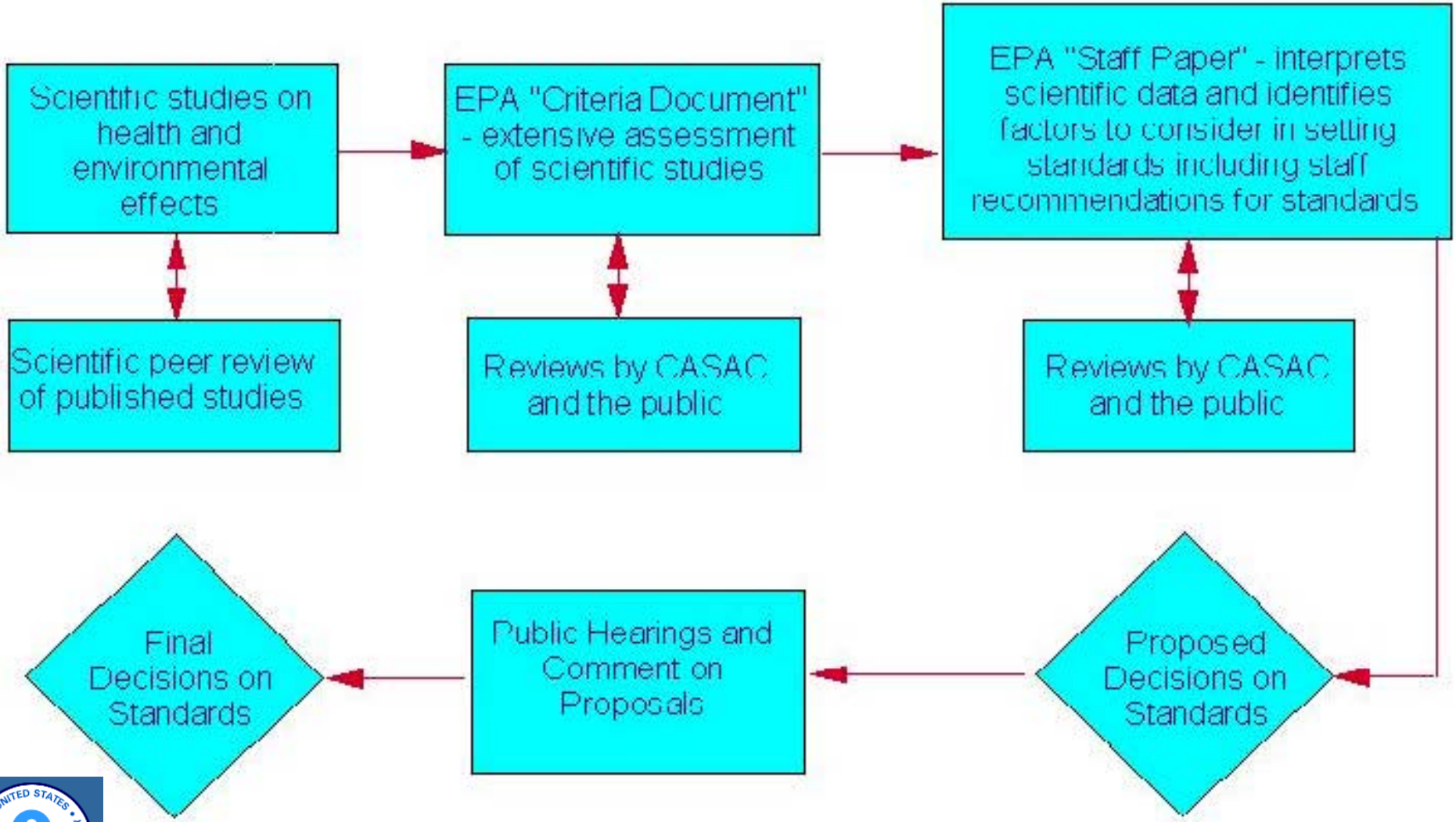
- Ozone has a clear, documented impact on human health, crops, and ecosystems

- Current scientific review shows that exposure to ozone levels at and below the current standard causes significant adverse health effects in children and healthy adults who engaged in outdoor activities

- Clean Air Act requires EPA to review these standards every five years with the advice of the Clean Air Scientific Advisory Committee

How's the NAAQS established? ....

Review Process for NAAQS



Differences between previous and revised ozone standard

Previous 1-Hour Standard	Revised 8-Hour Standard
1-hour Averaging Time	8-Hour Averaging Tim
0.12 Parts Per Million	0.08 Parts Per Million
Exceedance Based Standard	Concentration Based Standard

Differences between previous and revised ozone standard

1-Hour Standard

Three Year Compliance Period

Attainment Test:

Avg. Expected Exceedance Rate less than/equal to 1

8-Hour Standard

Three Year Compliance Period

Attainment Test:

Average Annual 4th Highest daily max. 8-hour concentration, must not exceed 0.08 ppm

Timeline for Ozone NAAQS

Early 2003	Publish proposed implementation rule
April 2003	States/Tribes provide designation recommendations
Late 2003	Publish final implementation rule
April 2004	EPA signs final nonattainment designations (effective shortly after)
April-May 2007	Nonattainment area SIPs submitted to EPA (3 years from effective date)
2007-2021	Range of attainment dates

Sec. 107(d)(1)(A)(i) Designations

Nonattainment Area …

- *any area that does not meet (or that contributes to ambient air quality in a nearby area that does not meet) the national primary or secondary ambient air quality standard for the pollutant.*

Principles For Developing Proposed Implementation Rule

1. Incentives for expeditious attainment of 8-hour standard
2. Reasonable attainment deadlines
3. Basic, straightforward structure-communicated easi
4. Consistent with CAA and Supreme Court decision
5. Provide flexibility to states
6. Emphasize national and regional measures
7. Reduce the need for more expensive local controls
8. Smooth transition from 1-hr O3 NAAQS to 8-hr O3 NAAQS

Topics Included in the Rule

1. Transition from 1-hour to 8-hour NAAQS
2. Attainment Dates
3. Area Classification Approaches
4. Anti-backsliding
5. Flexibility vs. Mandatory Controls
6. Ozone Transport Issues
7. Modeling & Attainment Demonstrations

Topics Included in the Rule

8. Reasonable Further Progress Requirements
9. Reasonably Available Control Technology
10. Conformity
11. New Source Review
12. Optimizing for O3 and PM
13. Tribal Issues
14. Timing of Designations & Classifications

Transition from 1-hour to 8-hour NAAQS

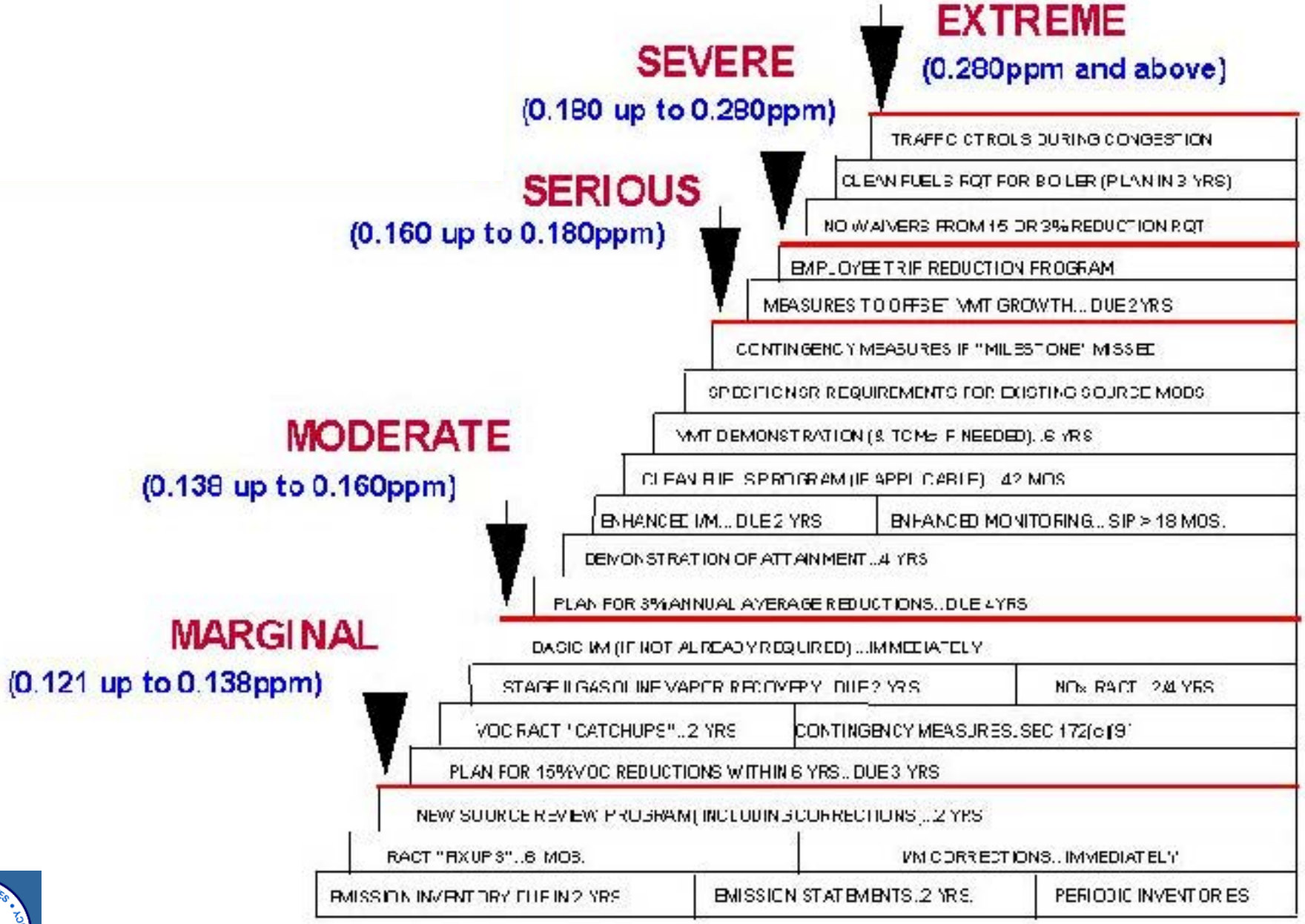
TITLE I –
AIR POLLUTION PREVENTION AND CONTROL
Part D – Plan Requirements for Nonattainment Areas

SUBPART 1 - Nonattainment Areas in General

Sec. 171. Definitions.
Sec. 172. Nonattainment plan provisions.
Sec. 173. Permit requirements.
Sec. 174. Planning procedures.
Sec. 175. Environmental protection agency grants.
Sec. 175A. Maintenance Plans
Sec. 176. Limitation on certain federal assistance.
Sec. 176A. Interstate Transport Commissions.
Sec. 177. New motor vehicle emission standards in nonattainment areas.
Sec. 178. Guidance documents.
Sec. 179. Sanctions and consequences of failure to attain
Sec. 179B. International border areas

SUBPART 2 - Additional Provisions for Ozone Nonattainment Areas

Sec. 181. Classifications and attainment dates.
Sec. 182. Plan submissions and requirements.
Sec. 183. Federal ozone measures.
Sec. 184. Control of interstate ozone air pollution.
Sec. 185. Enforcement for Severe and Extreme ozone nonattainment areas for failure to attain
Sec. 185A. Transitional areas
Sec. 185B. NOx and VOC study.


EXTREME
(0.280ppm and above)
SEVERE
(0.180 up to 0.280ppm)
SERIOUS
(0.160 up to 0.180ppm)
MODERATE
(0.138 up to 0.160ppm)
MARGINAL
(0.121 up to 0.138ppm)
TRAFFIC CTROLS DURING CONGESTION
CLEAN FUELS RQT FOR BOILER (PLAN IN 3 YRS)
NO WAIVERS FROM 15 OR 3% REDUCTION RQT
EMPLOYEE TRIP REDUCTION PROGRAM
MEASURES TO OFFSET VMT GROWTH...DUE 2 YRS
CONTINGENCY MEASURES IF "MILESTONE" MISSED
SPECIFIC NSR REQUIREMENTS FOR EXISTING SOURCE MODS
VMT DEMONSTRATION (& TCMs IF NEEDED)...6 YRS
CLEAN FUELS PROGRAM (IF APPLICABLE)...42 MOS.
ENHANCED I/M...DUE 2 YRS
ENHANCED MONITORING...SIP > 18 MOS.
DEMONSTRATION OF ATTAINMENT...4 YRS
PLAN FOR 3% ANNUAL AVERAGE REDUCTIONS...DUE 4 YRS
BASIC I/M (IF NOT ALREADY REQUIRED)...IMMEDIATELY
STAGE II GASOLINE VAPOR RECOVERY...DUE 2 YRS
NOx RACT...24 MOS.
VOC RACT "CATCHUPS"...2 YRS
CONTINGENCY MEASURES...SEC. 172(c)(9)
PLAN FOR 15% VOC REDUCTIONS WITHIN 6 YRS...DUE 3 YRS
NEW SOURCE REVIEW PROGRAM (INCLUDING CORRECTIONS)...2 YRS
RACT "FIX UPS"...6 MOS.
VMT CORRECTIONS...IMMEDIATELY
EMISSION INVENTORY DUE IN 2 YRS
EMISSION STATEMENTS...2 YRS.
PERIODIC INVENTORIES

Ozone 8-hour Implementation Approach

This site links you to information on the ozone 8-hour implementation approach. It contains publicly available electronic information w is being placed in the docket for the implementation Rule for 8-hour ozone NAAQS; the docket number is A-2001-31. Note that the d may contain more material (e.g., material that is not available electronically) than is found on this site.

The WPD is a Wordperfect file, DOC is a Word file, PDF is a Acrobat Reader file and PPT is a PowerPoint file. To link to the file/doc you are interested in, left click with your mouse on the

1. Material related to conference calls with EPA on Implementation of 8-hr Ozone National Ambient Air Quality Standard
   a. October 16, 2001, Implementation of 8-Hr O3 NAAQS EPA-Governmental Organizations Conference Call (WPD)
   b. July 11, 2001 Possible 8-Hr O3 NAAQS Implementation Issue Topics - Draft (WPD); (DOC)
   c. May 25, 2001, Implementation Letter to Mr. Ray Scheppach, National Governors Association, from John Seitz (WPD (DOC)
   d. September 9, 2001, 8-HR OZ NAAQS Implementation Approach Governmental Stakeholder Organization Contacts ((DOC)
2. October 11, 200 Status of Implementation of 8-Hour OZ NAAQS (WPD)
3. Agenda for October 9, 2001 EPA-G8 Conference Cal
   a. Maps (PowerPoint file)
   b. 8-Hour Ozone NAAQS Implementation Conference Call - EPA and STAPPA/ALAPCO Group of 8 (WPD)
4. Objectives & Issue Topics
   a. May 8, 200 Draft Possible 8-Hr O3 NAAQS Implementation Issue Topics (WPD)
   b. Initial list of policy objectives for a Subpart 1 framework (WPD)
5. October 10, 200 Telephone Conference Meeting Summary (WPD)

Implementation
for Ozone
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xxvi. June 18, 2002, New Jersey, RAQP
xxvii. June 18, 2002, Arizona DEQ
xxviii. June 21, 2002, Pinnacle West
xxix. June 27, 2002, Pima County, AZ, APCD
xxx. June 28, 2002, Wisconsin DNR
xxxi. July 3, 2002, Navy (PDF)
xxxii. August 6, 2002, Maricopa MAG, AZ (PDF) NEW

13. Preliminary Draft Issue Papers NEW
    a. How will EPA address transport of ground-level ozone and its precursors and requirements for modeling and attainment demonstration SIPs when implementing the 8-hour ozone standard? (WPD)
    b. When will EPA require 8-hour SIP submissions? (WPD)
    c. What should the requirements for General Conformity be? Will there be different de minimis emission levels for Federal Actions? (WPD)
    d. How will EPA ensure that the 8-hour ozone standard will be implemented in a way which allows an optimal mix of controls for ozone, PM2.5 and regional haze? (WPD)
    e. What ambient monitoring requirements will apply under the 8-hr ozone NAAQS? (WPD)
    f. How will EPA treat attainment dates for the 8-hour ozone standard? (WPD)
    g. Should prescribed requirements of Subpart 2 apply in all 8-hour nonattainment areas classified under subpart 2 or is there flexibility to apply equivalent measures, or drop some requirements altogether in certain narrowly defined circumstances where they are determined to be inappropriate? (WPD)
    h. How will EPA reconcile Subparts 1 and 2? How will EPA classify nonattainment areas for the 8-hour standard? What attainment dates would apply? (WPD)
    i. How will EPA transition from the 1-hour to the 8-hour standard? (WPD)

14. Presentation Materials NEW
    a. Ozone NAAQS Implementation presented at the 23rd Annual EPA-AWMA Information Exchange, December 5, 2002 (PDF)

15. Relevant Documents NEW
    a. 2002 Base Year Emissions Inventory SIP Planning: 8-hr Ozone, PM2.5 and Regional Haze Programs, November 18, 2002
    b. DRAFT Power Point Presentation on 8-hour Ozone Notice of Proposed Rulemaking, January 22, 2003

16. Other Correspondence NEW
    a. California Air Resources Board December 6, 2002
    b. EPA's December 31, 2002, reply to California Air Resources Board letter of December 6, 2002 (see above)

17. Air Quality Data - 1 and 8-hour Ozone Design Values - (The Ozone and Carbon Monoxide Report contains tables of 1-hour ozone design values for areas and 8 hour ozone design values for counties.)
    a. 1998-2001
    b. 1998-2000
    c. 1997-1999

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RECONCILING SUBPARTS 1 AND 2; CLASSIFICATION AND ATTAINMENT DATES

<u>Option 1</u>–Classify 8-hr nonattainment areas based on 8-hr ozone (O_3) design values

- **Uses 8-hr design values–more accurately reflects the magnitude of the 8-hour ozone problem**
- **All 8-hr nonattainment areas would be classified under subpart 2. In general, areas classified under subpart 2 would need to meet subpart 2 requirements for their classification level and would have attainment dates in subpart 2**

Transition from 1-hour to 8-Hour

1- Hour

Sec. 181. CLASSIFICATIONS AND ATTAINMENT DATES.

a) Classification and Attainment Dates for 1989 Nonattainment Areas.

Each area designated nonattainment for ozone pursuant to section 107(d) ... be classified at the time of such designation, under table 1, by operation of law, as a Marginal Area, a Moderate Area, a Serious Area, a Severe Area, or an Extreme Area based on the design value for the area. The design value shall be calculated according to the interpretation methodology issued by the Administrator most recently before the date of the enactment of the Clean Air Act Amendments of 1990. For each area classified under this subsection, the primary standard attainment date for ozone shall be as expeditiously as practicable but not later than the date provided in table 1.

TABLE 1

Area class	Design value*	Primary standard attainment date**
Marginal	0.121 up to 0.138	3 years after enactment
Moderate	0.138 up to 0.160	6 years after enactment
Serious	0.160 up to 0.180	9 years after enactment
Severe	0.180 up to 0.280	15 years after enactment
Extreme	0.280 and above	20 years after enactment

* The design value is measured in parts per million (ppm).

8-Hour

TABLE 2

TABLE 1 OF SUBPART 2 1-HOUR OZONE CLASSIFICATION TABLE TRANSLATION TO 8-HOUR DESIGN VALUES

Area class		CAA design value thresholds 1-hour ozone ppm	% above 1-hour ozone NAAQS	Translated 8-hour design value thresholds ppm ozone	Primary standard attainment date–ye after enactment (1 hour std)**
Marginal	from	0.121	0.833	0.085*	3 years
	up to	0.138	15.000	0.092	
Moderate	from	0.138	15.000	0.092	6 years
	up to	0.160	33.333	0.107	
Serious	from	0.160	33.333	0.107	9 years
	up to	0.180	50.000	0.120	
Severe-15	from	0.180	50.000	0.120	15 years
	up to	0.190	58.333	0.127	
Severe-17	from	0.190	58.333	0.127	17 years
	up to	0.280	133.333	0.187	
Extreme	equal to or above	0.280	133.333	0.187	20 years

* The table's lowest value reflects the lowest nonattaining value, viz., 0.085 ppm.

TABLE 2 TABLE 1 OF SUBPART 2 1-HOUR OZONE CLASSIFICATION TABLE TRANSLATION TO 8-HOUR DESIGN VALUES					
Area class		CAA design value thresholds 1-hour ozone ppm	% above 1-hour ozone NAAQS	Translated 8-hour design value thresholds ppm ozone	Primary standard attainment date–years after enactment (1-hour std)**
Marginal	from	0.121	0.833	0.085*	3 years
	up to	0.138	15.000	0.092	
Moderate	from	0.138	15.000	0.092	6 years
	up to	0.160	33.333	0.107	
Serious	from	0.160	33.333	0.107	9 years
	up to	0.180	50.000	0.120	
Severe-15	from	0.180	50.000	0.120	15 years
	up to	0.190	58.333	0.127	
Severe-17	from	0.190	58.333	0.127	17 years
	up to	0.280	133.333	0.187	
Extreme	equal to or above	0.280	133.333	0.187	20 years

* The table's lowest value reflects the lowest nonattaining value, viz., 0.085 ppm.

RECONCILING SUBPARTS 1 AND 2; CLASSIFICATION AND ATTAINMENT DATE—cont'd

Option 2 – Hybrid 2-step approach

- **Step 1:**

  Separate areas into two groups based on whether their 1-hour design value would require them to be placed in subpart 2.

  - **Group 1 <0.121 ppm**
  - **Group 2 > 0.121 ppm**

RECONCILING SUBPARTS 1 AND 2; CLASSIFICATION AND ATTAINMENT DATE—cont'd

Step 2- Option 2 of Hybrid 2-step approach

Step 2: Classify Areas

- **Group 1 Areas**

Those areas meeting the 1-hour standard would be regulated under Subpart 1, for these areas, EPA could develop a classification scheme

- **Group 2 Areas**

Would receive Subpart 2 classifications according to their 8-Hour Ozone Design Value

RECONCILING SUBPARTS 1 AND 2; CLASSIFICATION AND ATTAINMENT DATE—cont'd

- **Proposed Incentive Feature–applicable to either classification Option 1 or 2**
  - **Allows an area to qualify for a lower classification by demonstrating it will meet the attainment date of the lower classification**
  - **Could be done via EPA regional/national modeling or a State's demonstration using EPA-approved modeling**

Sources of Information

www.epa.gov/ttn/naaqs/ozone/ozonetech/o3imp8hr/o3imp8hr.htm

www.epa.gov/ttn/oarpg/naaqsfin

www.epa.gov/ttn/naaqs/standards/ozone/s_o3_index.htm

Messages

- Ozone Implementation Timetable
- Check the 8-Hour Implementation Website for new information
- Solicit comments on proposed rule when published (early 2003)

Contact Information

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